

# **Air Education and Training Command**

---

***Sustaining the Combat Capability of America's Air Force***



## **Occupational Survey Report AFSC 1C6X1 Space Systems Operations**

**U.S. AIR FORCE**

**Lt Bryan Pickett  
Sep 04**

---

***Integrity - Service - Excellence***

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>01 SEP 2004</b>		2. REPORT TYPE <b>N/A</b>		3. DATES COVERED <b>-</b>	
4. TITLE AND SUBTITLE <b>Occupational Survey Report AFSC 1C6X1 Space Systems Operations</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Air Force Occupational Measurement Squadron Randolph AFB, TX</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release, distribution unlimited</b>					
13. SUPPLEMENTARY NOTES <b>See also ADM001753., The original document contains color images.</b>					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>SAR</b>	18. NUMBER OF PAGES <b>58</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			



# Overview



- AFOMS products and mission
- Survey background
- Survey results



# AFOMS Key Products



## Promotion Tests

- Specialty Knowledge Tests (SKTs)
- Promotion Fitness Examinations (PFEs)
- USAF Supervisory Examinations (USAFSEs)



## Analysis

- Job Inventories
- Survey Reports
- Task Analysis Reports

## Study Guides

- PFE
- USAFSE





# Occupational Test Development Flight (TE)

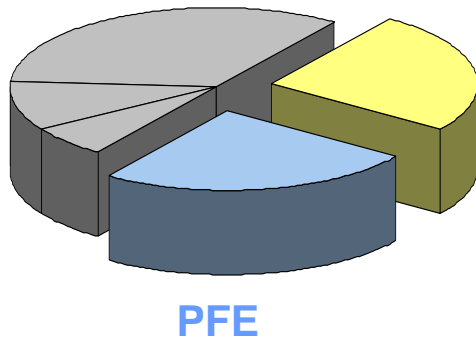


AETC

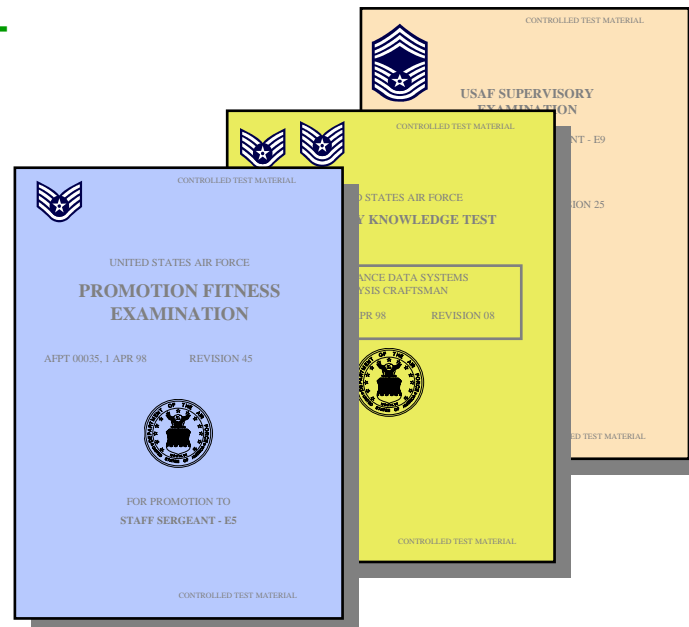
- Develop, print, ship all enlisted promotion tests and manage worldwide network of test control officers

## Valid, Fair, and Credible Tests

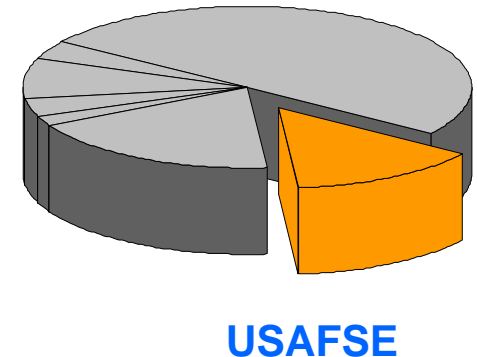
Weighted Airman  
Promotion System



SKT



Senior NCO  
Promotion Program





# Professional Development Flight (PD)



**AETC**

- Improve Air Force capabilities by providing professional development study guides
- Produce enlisted promotion test study guides





# Occupational Analysis Flight (OA)



**AETC**

- Provides Complete Survey of AFSC
  - Paygrade
  - MAJCOM
  - Duty Station
- Areas Analyzed
  - Career Ladder Structure
  - Skill-Level Progression
  - Training
  - Job Satisfaction
  - Predictive Retention

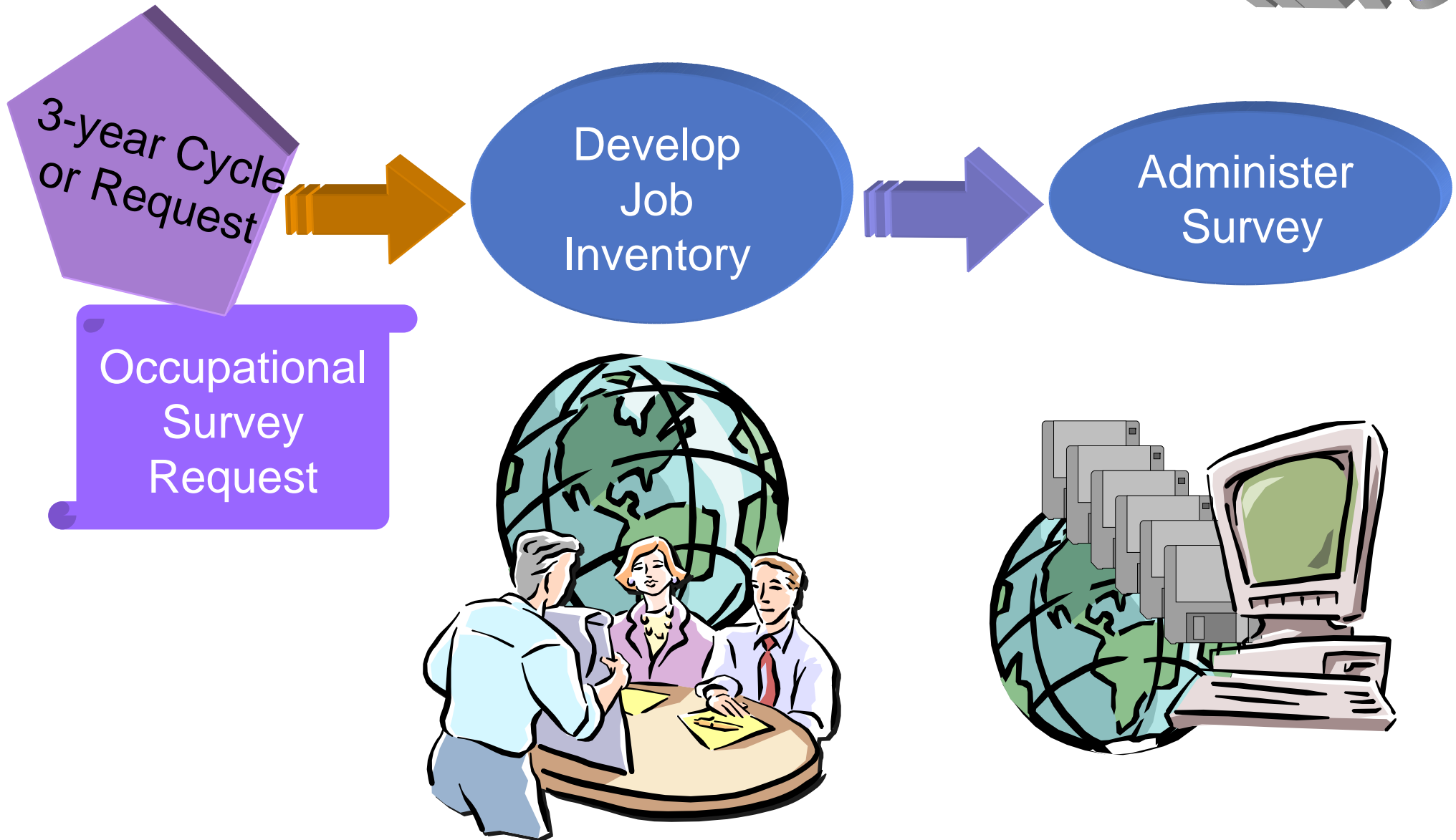




# Occupational Analysis Process



AETC



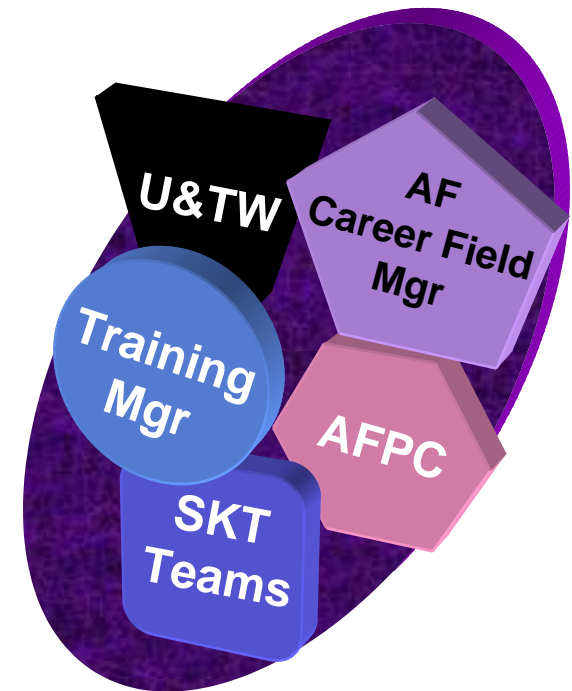
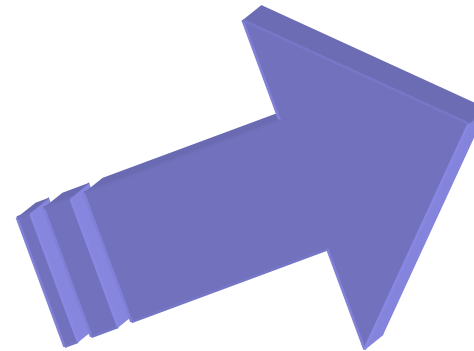
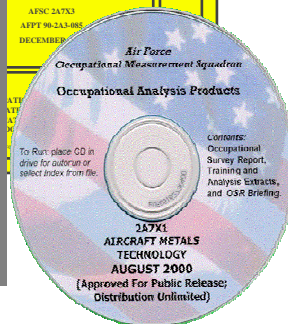
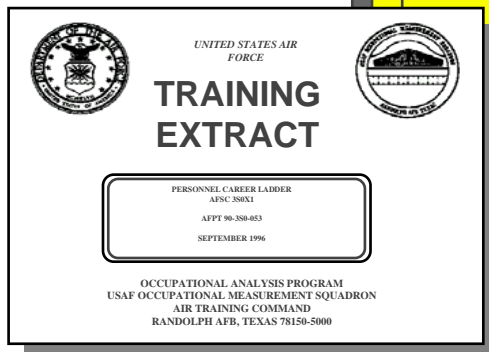
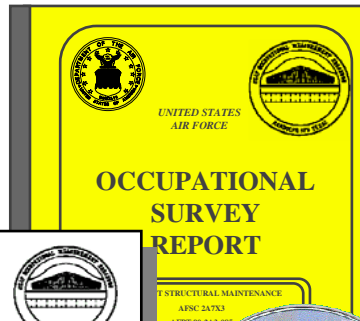
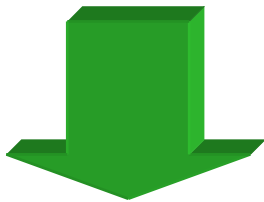


# Occupational Analysis Process (Cont'd)



AETC

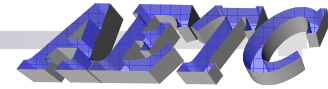
Analyze Data







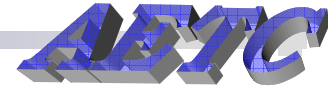
# Overview



- **Our Mission**
- **Our Team**
- **Our Products & Processes**
- **Program Integration**



# Mission



**Provide occupational programs to optimize  
United States Air Force  
personnel and training decisions**





# The Team



**AETC**



Air Education and Training Command  
Director of Operations  
**Major General William Fraser III**

First  
Sergeant  
**MSgt "EJ" Jones**

AFOMS  
Commander  
**Lt Col John Gardner**

Operations  
Officer  
**Major Tom Jervey**

Occupational  
Analysis Flight  
**Mr John Kammrath**

Professional  
Development Flight  
**CMSgt Debra Bass**

Test Development  
Flight  
**Maj Tom Jervey**

Resources Flight  
**Maj Jose Caussade**





# Key Products



**AETC**

## Promotion Tests

- 320 Promotion Tests
- 600+ SMEs Hosted

## Study Guides

- 540K Study Guides distributed



## Resources

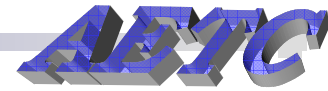
- Corporate Database
- Software Design

## Analysis

- Occupational Surveys
- Task Analysis Reports
- SKT Extracts/Testing Importance Surveys



# Applications of Our Data

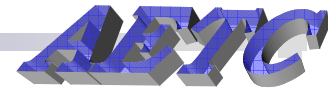


- **Promotion Testing:**
  - Validation of every test question
- **Training:**
  - What...When...Where...To Whom...How??
- **Personnel:**
  - Merge or separate occupations
- **Special Use...Research:**
  - Retention...Force Development....
- **Deployment /Home Station:**
  - Who...What...When...Where??





# Test Development Mission



**Develop, print, ship all enlisted promotion tests and manage worldwide network of test control officers**

**... One-stop shopping for promotion tests**



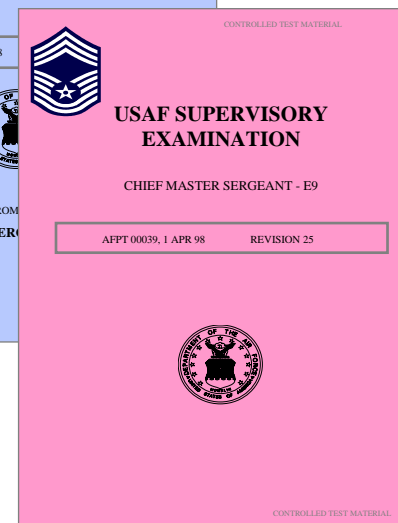
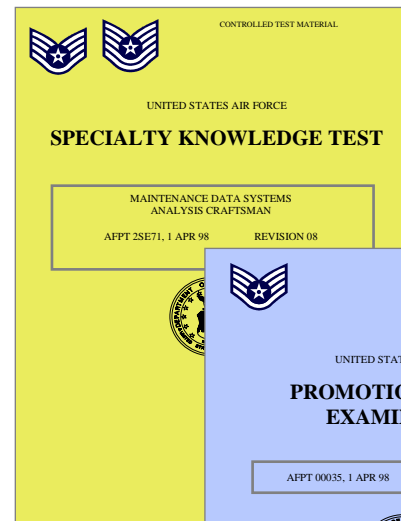


# Promotion Testing: Cornerstone of WAPS

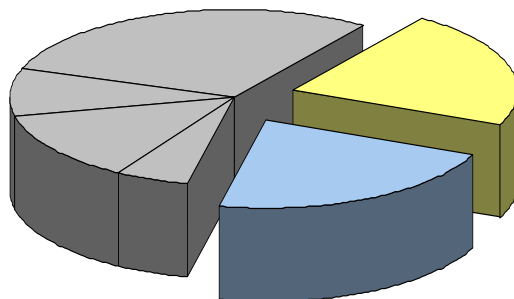


**AETC**

## Valid, Fair, and Credible Tests



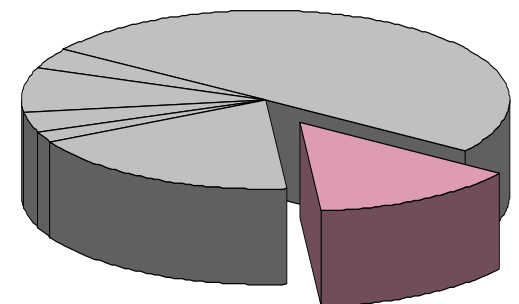
### Weighted Airman Promotion System



**SKT**

**PFE**

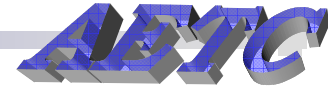
### Senior NCO Promotion Program



**USAFSE 15**



# Professional Development Mission



**Improve Air Force capabilities by providing professional development study guides & Airman's Handbook**

**...Produce enlisted promotion test study guides & Airman's Handbook**





# Professional Development: Shaping the Enlisted Corps

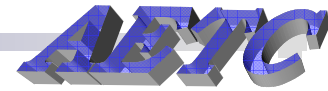


- **Identify common knowledge for all NCOs**
- **Provide single source reference for promotion testing & professional development**





# Resources Mission



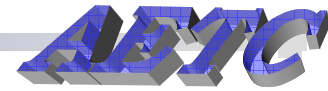
**Provide financial / resource stewardship and automation support for the AFOMS mission**

**...Keep the store open**





# Occupational Analysis Mission



**Facilitate decision-making by providing objective information about Air Force occupations**

**...Find out everything you ever wanted to know about what people do in their Air Force jobs**



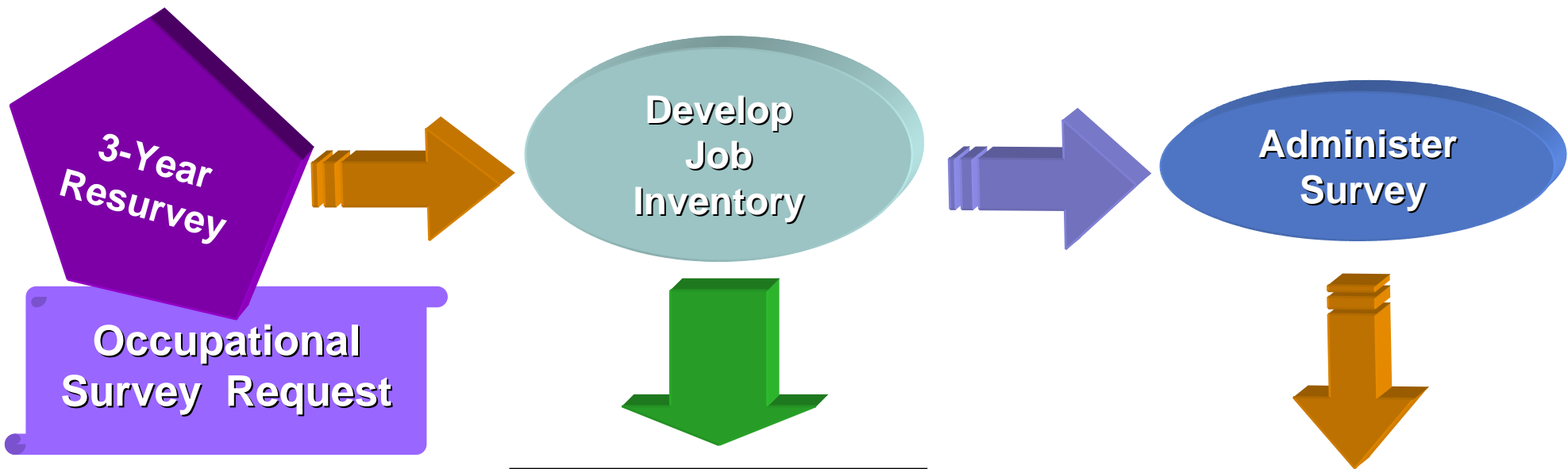




# Occupational Analysis Process (1)



AETC

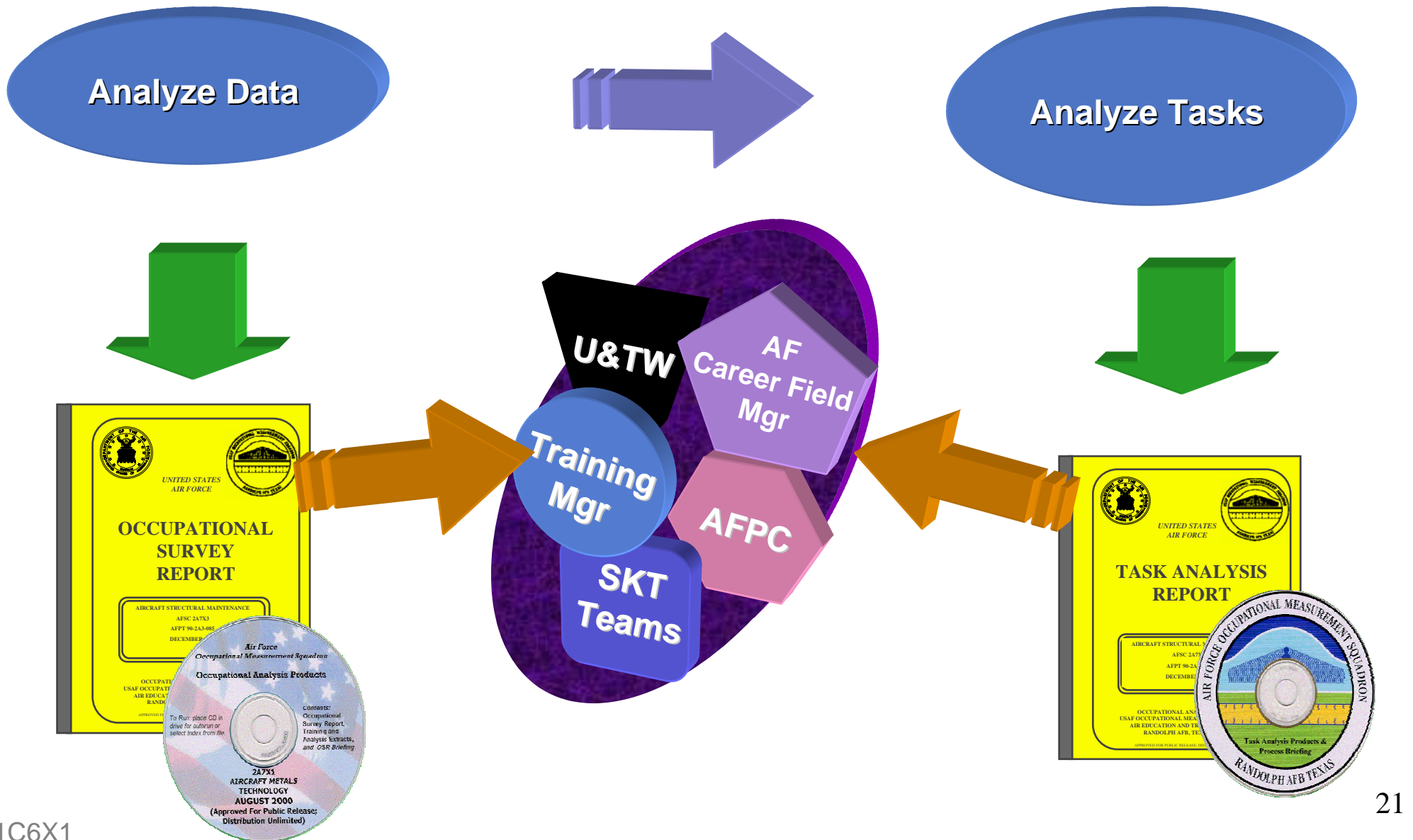




# Occupational Analysis Process (2)



AETC

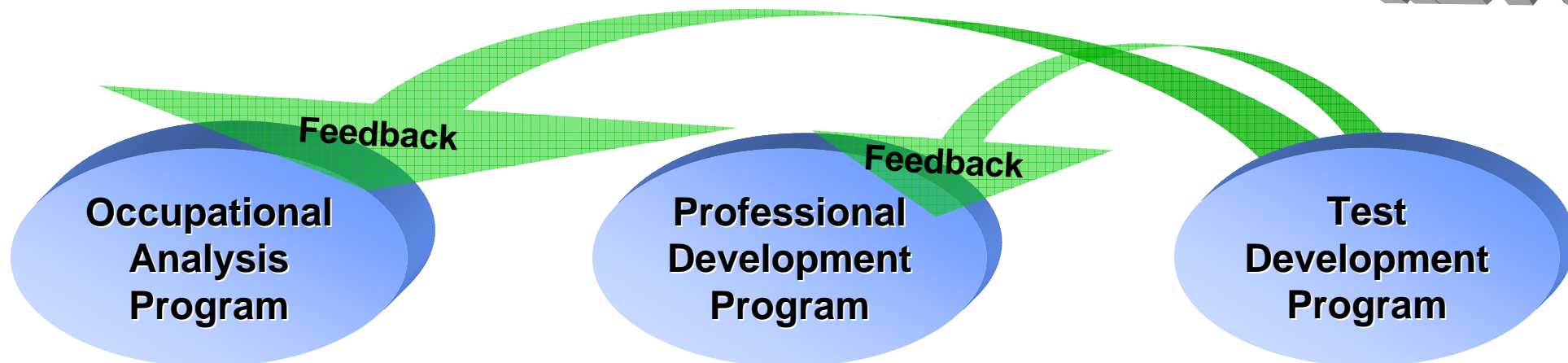




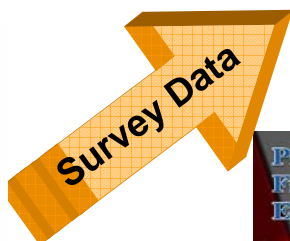
# Program Integration



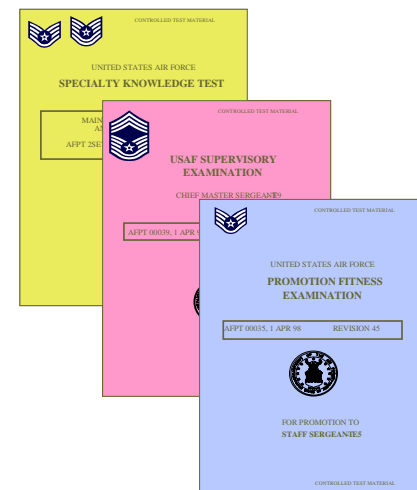
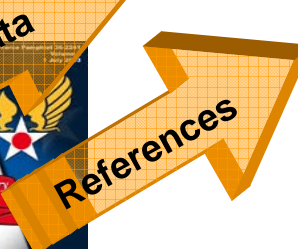
**AETC**



**Occupational Analysis**



**Study Guides**



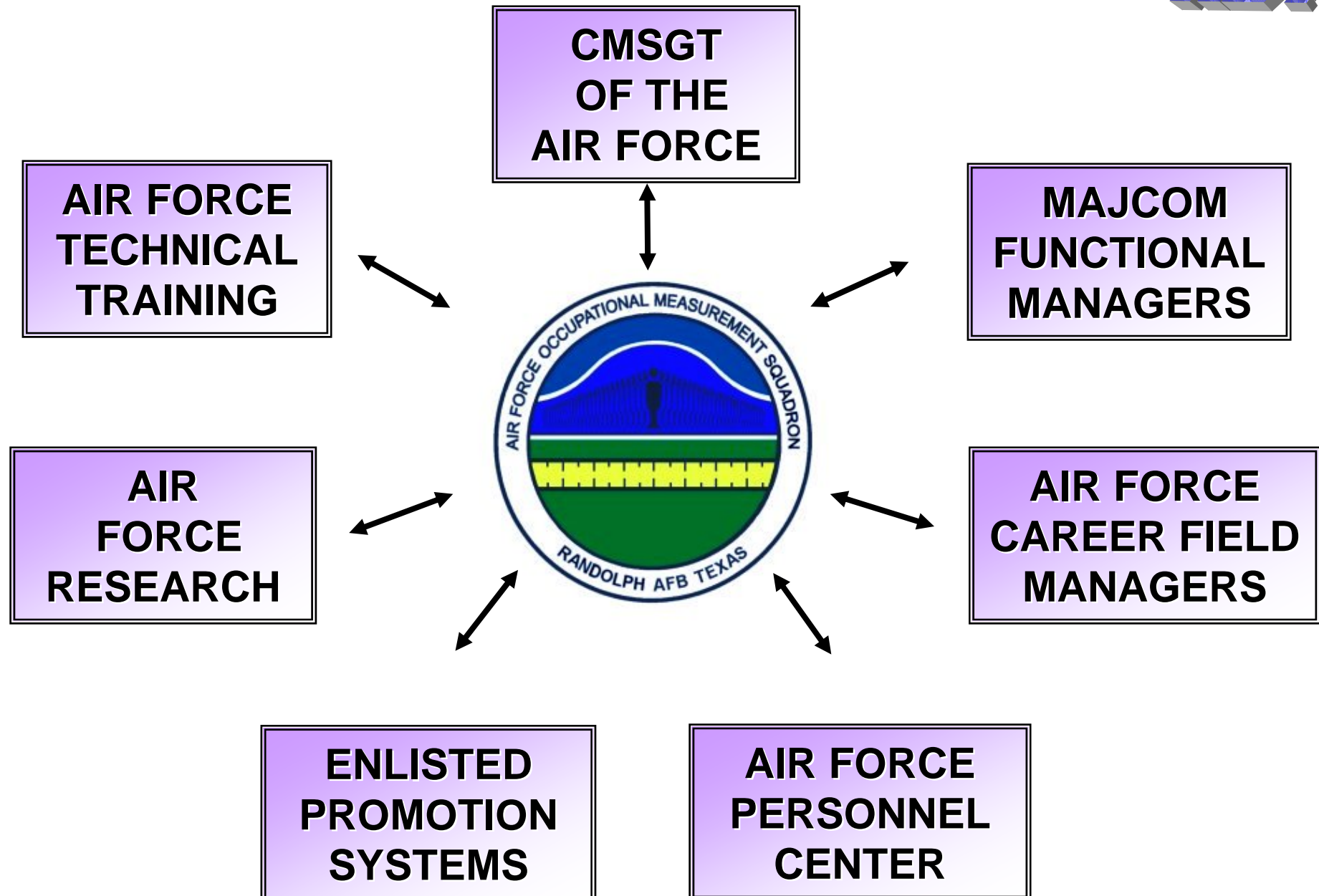
**Promotion Tests**



# “Sphere” of Influence



**AETC**







# Occupational Measurement...



**AETC**

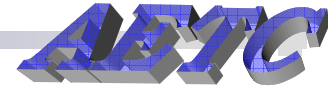


## ...Combat-Ready Air Force

**Our success rooted in our objective orientation –  
“No dog in the fight”**



# Executive Summary



- Two clusters and three independent jobs identified during analysis
- Technical tasks are performed primarily by 3- and 5-skill-level members
- 7-skill-level members perform mix of technical and supervisory tasks
- 9- and CEM-skill-level members perform mostly managerial tasks
- Majority of 3-, 5-, and 7-skill-level members are in technical jobs
- Draft career ladder document not analyzed
- Job satisfaction indicators are very good



# Survey Background



- Last Occupational Survey Report (OSR) – September 1997
- Data also collected in 1999, but no OSR was written
- Current survey developed – August 2003 - February 2004
  - Vandenberg AFB CA (Tech School)(10)
  - Vandenberg AFB CA (8)
  - Eglin AFB FL (4)
  - Patrick AFB FL (8)
  - Shriever AFB CO (10)
  - Peterson AFB CO (5)
  - Beale AFB CA (5)
  - Buckley AFB CO (8)
  - Cheyenne Mountain AFS CO (4)





# Survey Background



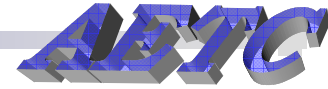
- Survey initiated to obtain data to:
  - Evaluate current classification and training documents
  - Support promotion test development
- Current survey data collected – April - July 2004
- Components surveyed:
  - Active Duty: 3-, 5-, 7-, 9-, and CEM-Skill Levels
  - Guard: 3-, 5-, 7-, and 9-Skill Levels
  - Reserve: 3-, 5-, 7-, 9-, and CEM-Skill Levels







# Survey Sample Characteristics



	<u>AD</u>	<u>AFRC</u>	<u>ANG</u>	<u>Total</u>
Assigned*	1,277	138	61	1,476
Mailed Out	1,181	121	58	1,360
Sample	482	83	31	596
Usable Returns	41%	69%	53%	40%

- Average time in career field for AD: 5 yrs 9 mos
- Average TAFMS for AD: 10 yrs 6 mos
- Percent of AD in first enlistment: 17%

\* Assigned as of Apr 04



# Paygrade Characteristics



AETC



## Paygrade Distribution

		Assigned*	Sample
	E-1 - E-2 -	2%	1%
	E-3 -	11%	7%
	E-4 -	16%	13%
	E-5 -	33%	36%
	E-6 -	19%	20%
	E-7 -	15%	18%
	E-8 -	3%	4%
	E-9 -	**	1%

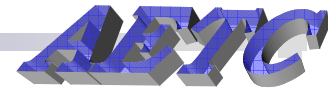


\* Assigned as of Apr 04

\*\* Indicates less than 1%



# Command Representation



Command	Assigned %*	Sample %
AFSPC	76	68
AETC	6	9
STRAT	2	3
OTHER**	3	1
AFRC	9	14
ANG	4	5



\* Assigned as of Apr 04

\*\* Highest percentages of other includes ACC and NORAD



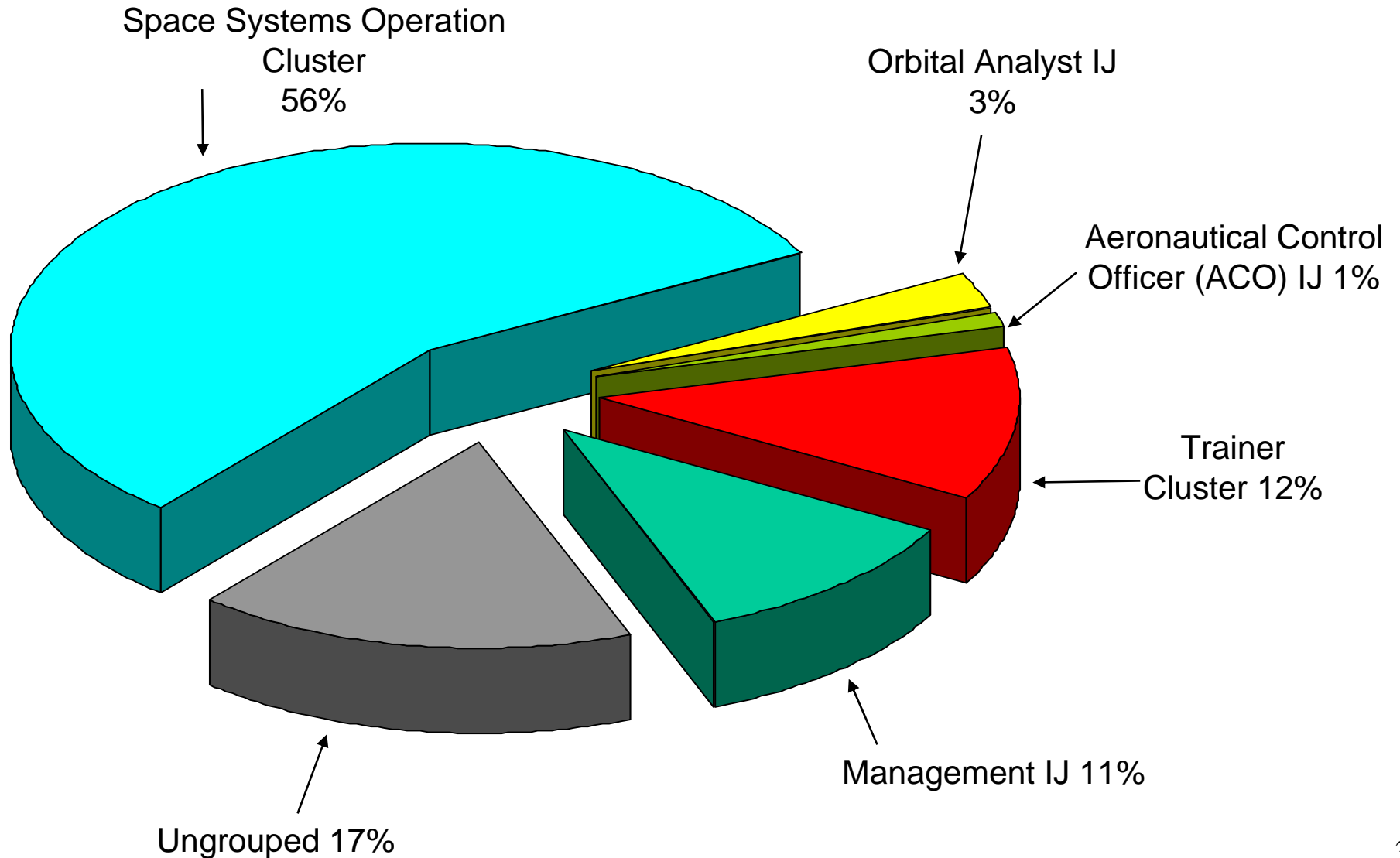
# Job Structure



AETC

IJ =Independent Job

**Sample size: 596**



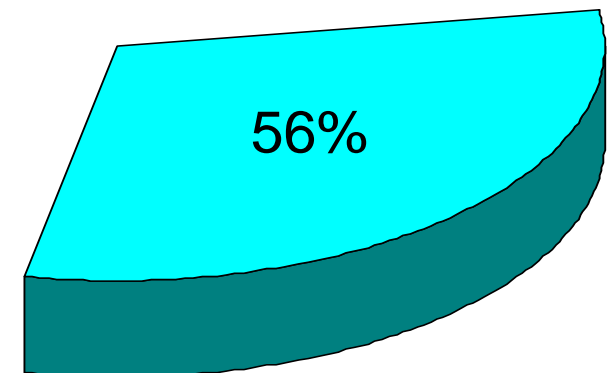


# Satellite Systems Operator (SSO) Job (N=63)



**AETC**

- Respond to commanding anomalies
- Perform electromagnetic interference (EMI) procedures
- Monitor satellite subsystems
- Identify or report space system anomalies
- Perform emergency action (EA) checklists
- Respond to subsystem anomalies
- Perform space systems anomaly resolution procedures
- Perform commanding procedures, other than evaluations
- Troubleshoot satellite systems
- Perform pre-pass procedures





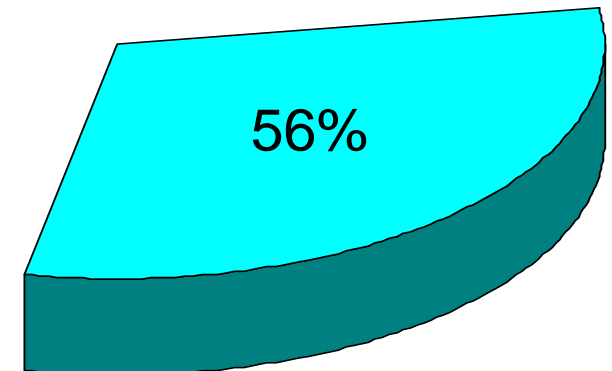
# Initial Qualification Trainers

## Job (N=60)



**AETC**

- Counsel trainees on training progress
- Develop or procure training materials or aids
- Brief personnel concerning training programs or matters
- Determine training requirements
- Perform pre-pass procedures
- Log operational activities
- Perform post-pass procedures
- Perform crew changeover or shift procedures, other than ZULU day
- Respond to systems alarms
- Perform space systems anomaly resolution procedures



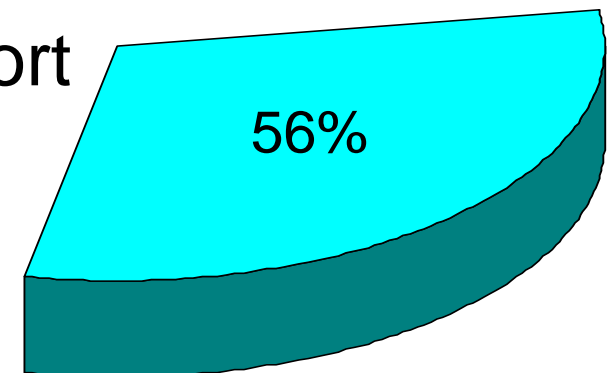


# Space Console Operator Job (N=55)



**AETC**

- Perform crew changeover or shift procedures, other than ZULU day
- Perform secure-voice procedures
- Perform daily tasking procedures
- Perform reentry assessment (RA) procedures
- Perform pre-planned launch (PPL) procedures
- Respond to changes of command and control
- Perform ANCHOR alert procedures
- Perform PPL procedures requiring EODETs
- Prepare and submit operations report (OPREP-3) incidents
- Perform authentication procedures



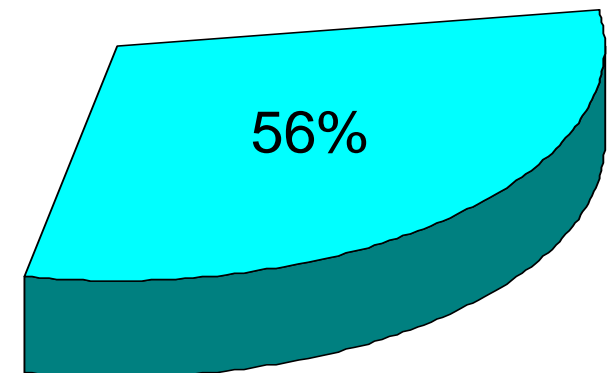


# Mission Crew Chiefs Job (N=45)



**AETC**

- Respond to bomb threats
- Perform crew changeover or shift procedures, other than ZULU day
- Log operational activities
- Perform security procedures
- Perform COMSEC procedures
- Respond to data or voice communications failures
- Respond to accident, injury, or illness notifications
- Perform real-world operations checks
- Perform authentication procedures
- Perform routine or administrative crew procedures





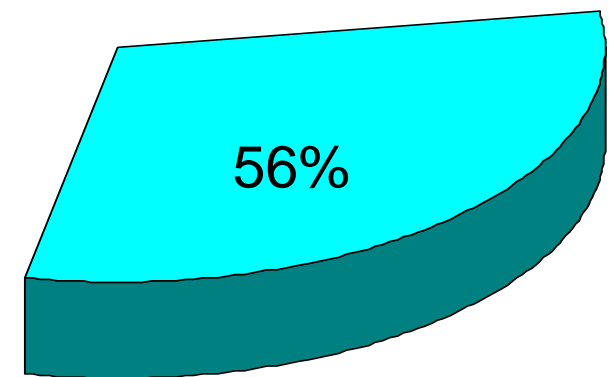


# Satellite Systems Operator (SSO) NCO Job (N=37)



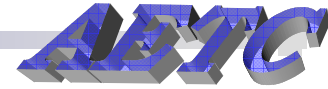
**AETC**

- Determine or establish work assignments or priorities
- Interpret policies, directives, or procedures for subordinates
- Write recommendations for awards or decorations
- Establish performance standards for subordinates
- Inspect personnel for compliance with military standards
- Counsel subordinates concerning personal matters
- Conduct self-inspections or self-assessments
- Assign personnel to work areas or duty positions

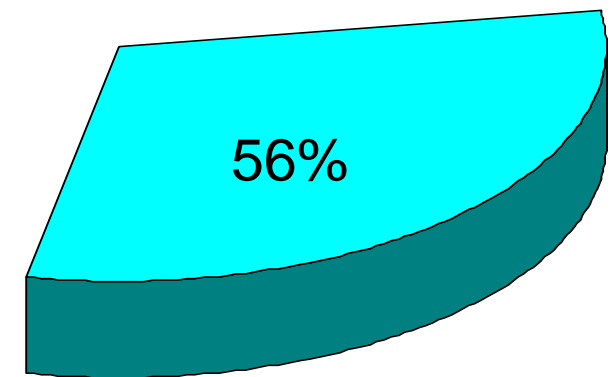




# Ground Systems Operator (GSO) Job (N=32)

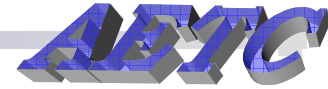


- Perform system configurations
- Respond to AFSCN malfunctions
- Perform AFSCN configuration procedures
- Monitor ground system configuration displays
- Verify ground systems configurations
- Respond to ground station malfunctions
- Respond to external data failures
- Perform system terminations
- Perform RGS-M configuration procedures
- Perform RGS-P configuration procedures

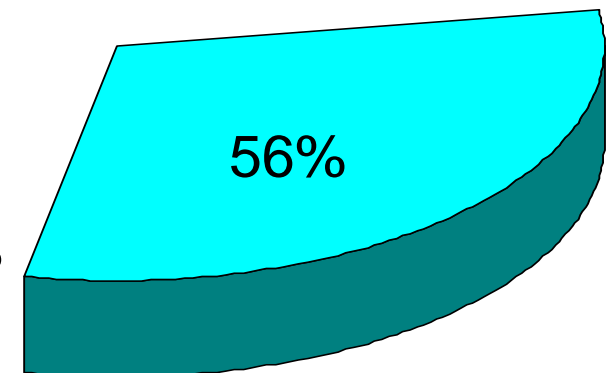




# Data Systems Operator (DSO) Job (N=26)

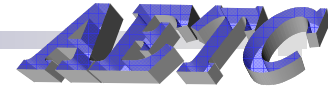


- Perform secure-voice procedures
- Respond to data or voice communications failures
- Monitor mission data displays
- Log operational activities
- Retrieve POI tasking orders
- Perform reentry assessment (RA) procedures
- Distribute mission data to specific users
- Run simulated exercise programs
- Collect manual data
- Assess site or systems degradations

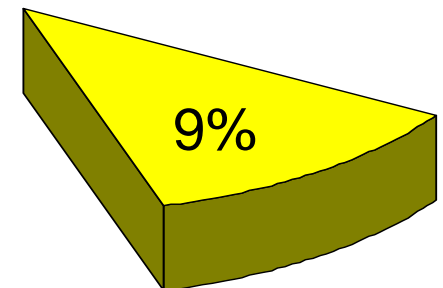




# Orbital Analyst IJ (N=19)



- Perform orbital analyses
- Perform high-interest catalog maintenance
- Perform high-interest taskings
- Perform manual or voice tasking procedures
- Perform launch observation processing procedures
- Perform post-launch procedures
- Perform catalog support procedures
- Perform launch and reentry procedures
- Perform multiple headcount procedures
- Perform ANALSAT management procedures
- Perform pre-planned launch (PPL) procedures
- Perform docking procedures



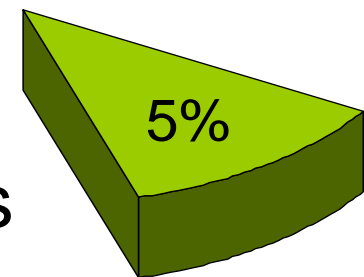


# Aerospace Control Officer (ACO) IJ (N=7)



**AETC**

- Perform laser operations
- Perform fouled range procedures
- Perform errant missile procedures
- Perform aircraft emergency procedures
- Perform aerospace monitoring and controlling procedures
- Perform airborne range safety procedures
- Perform area clearance procedures
- Prepare and submit launch correlation unit (LCU) net reports
- Perform range clear to launch procedures
- Identify launch agency or user constraints

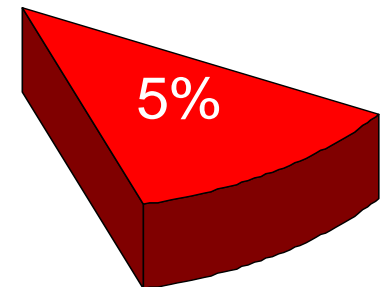




# Trainer Cluster (N=68)



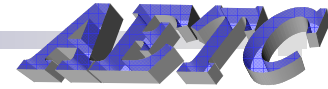
- Develop written tests
- Administer or score tests
- Develop or procure training materials or aids
- Conduct formal course classroom training
- Counsel trainees on training progress
- Determine training requirements
- Personalize lesson plans
- Develop training programs, plans, or procedures
- Maintain training records or files



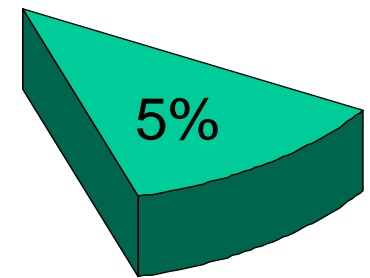
Trainer cluster includes: Trainer Job and  
Course Managers Job



# Management IJ (N=67)



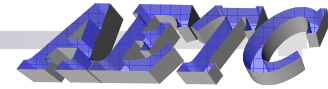
- Write minutes of briefings, conferences, or meetings
- Maintain administrative files
- Conduct general meetings, such as staff meetings, conferences, or workshops
- Initiate classified reports, messages, or documents
- Interpret policies, directives, or procedures for subordinates
- Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals
- Assign personnel to work areas or duty positions
- Develop or establish work methods or procedures







# Career Ladder Progression

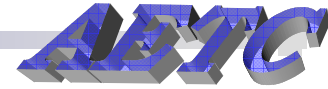


- 3- and 5-skill-level personnel
  - Work in the most technical jobs in the career field
  - Spend most of their time on technical tasks
- 7-skill-level personnel
  - Take on some supervisory duties
  - However, continue to perform technical tasks and work in technical jobs
- 9- and CEM-skill-level personnel
  - Perform more supervisory duties than 3-, 5- and 7-skill levels



# Percent Across Specialty Jobs

## DAFSC



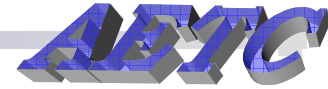
	DAFSC 1C631 (N=60)	DAFSC 1C651 (N=204)	DAFSC 1C671 (N=301)	DAFSC 1C691 (N=26)	DAFSC 1C600 (N=5)
<b>Space Systems Operations Cluster</b>	<b>65</b>	<b>60</b>	<b>53</b>	<b>58</b>	<b>20</b>
Satellite System Operator (SSO)	18	17	5	4	0
Initial Qualification Trainer	2	17	5	4	0
Space Console Operator	22	7	9	4	0
Mission Crew Chiefs	0	4	11	8	0
SSO NCO	0	*	9	35	20
Ground System Operator (GSO)	5	4	6	8	0
Data System Operator (DSO)	12	6	2	0	0
<b>Orbital Analyst IJ</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>0</b>
<b>Aerospace Control Officer (ACO) IJ</b>	<b>0</b>	<b>*</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>Trainer Cluster</b>	<b>3</b>	<b>13</b>	<b>13</b>	<b>0</b>	<b>0</b>
<b>Management IJ</b>	<b>0</b>	<b>3</b>	<b>16</b>	<b>42</b>	<b>60</b>
<b>Not Grouped</b>	<b>32</b>	<b>20</b>	<b>11</b>	<b>0</b>	<b>20</b>

\* Less than 1%



# Career Ladder Progression

## Percent Time Spent on Duties

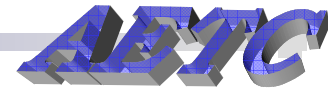


	DAFSC 1C631 (N=60)	DAFSC 1C651 (N=204)	DAFSC 1C671 (N=301)	DAFSC 1C691 (N=26)	DAFSC 1C600 (N=5)
Performing General Space Systems Operations Activities	54	46	34	24	4
Performing Missile Warning Activities	7	6	4	2	0
Performing Space Surveillance Activities	8	4	3	1	*
Performing Command and Control Activities	6	5	4	1	0
Performing Spacelift Activities	1	1	2	*	0
Performing Satellite Control Activities	14	12	6	5	0
Performing General Administrative and Technical Order (TO) System Activities	3	6	10	14	13
Performing General Supply and Equipment Activities	1	1	2	2	1
Performing Training Activities	4	16	15	7	9
Performing Management and Supervisory Activities	2	3	20	43	72

\* Less than 1%

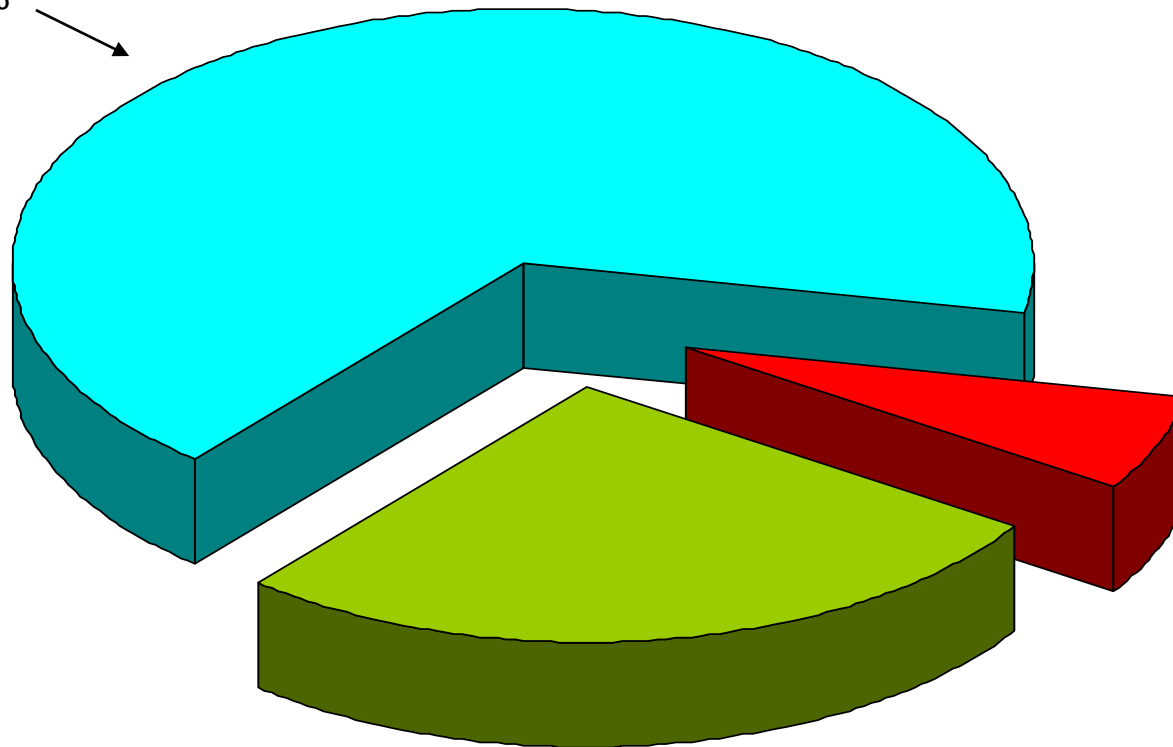


# First-Enlistment Job Structure



Sample size: 87

Space Systems Operations  
Cluster 67%

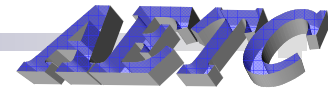


Trainer  
Cluster  
6%

Ungrouped  
27%



# First-Enlistment Personnel Representative Tasks



Percent  
Members  
Performing  
(N=87)

## Tasks

Perform evacuation procedures	76
Perform crew changeover or shift procedures, other than ZULU day	75
Perform force protection condition (FPCON) procedures	66
Respond to bomb threats	66
Perform emergency action (EA) checklists	64
Monitor mission data displays	61
Log operational activities	61
Perform secure-voice procedures	61
Perform electromagnetic interference (EMI) procedures	61
Perform real-world operations checks	59
Perform severe weather procedures	59
Perform information condition (INFOCON) procedures	59
Perform security procedures	57
Respond to accident, injury, or illness notifications	56
Perform fire alarm system procedures	56



# First-Enlistment Personnel Mission Supported



Percent  
Members  
Performing  
(N=87)

## Primary Mission

Satellite Command and Control  
Missile Warning  
Space Surveillance

69  
26  
5

## Secondary Mission

(N=87)

None  
Space Surveillance  
Other  
Missile Warning  
Satellite Command and Control

63  
13  
11  
7  
6

## Tertiary Mission

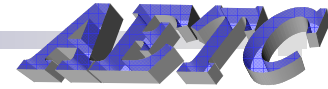
(N=87)

None  
Space Surveillance  
Missile Warning  
Other

86  
6  
6  
2



# Specialty Training Standard (STS) Analysis



- Draft STS was matched to survey data by technical school personnel
- STS analysis was not performed due to draft nature of STS and lack of coding for technical school training
- STS match can be seen in the Training Extract





# Job Satisfaction Indicators (Current vs. Previous Study)



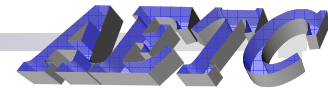
AETC

	1-48 Months		49-96 Months		97+ Months	
	2004 (N=87)	1999 (N=162)	2004 (N=140)	1999 (N=129)	2004 (N=255)	1999 (N=312)
Job interesting	88	79	83	79	90	81
Talents well utilized	<b>87</b>	72	<b>81</b>	62	<b>84</b>	75
Training well utilized	93	86	89	81	84	75
Sense of accomplishment	<b>80</b>	63	<b>68</b>	57	66	61
Plan to reenlist	61	*	63	*	64	*

\* Data was not collected during this study



# Job Satisfaction Indicators (Across Specialty Jobs)

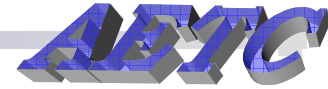


	Space Systems Operations Cluster (N=336)	Orbital Analyst IJ (N=19)	Aerospace Control Officer (ACO) IJ (N=7)	Trainer Cluster (N=68)	Management IJ (N=67)
Job interesting	90	100	86	85	88
Talents well utilized	87	100	86	90	76
Training well utilized	94	95	100	85	66
Sense of accomplishment	72	74	100	82	52
Plan to reenlist	65	58	86	72	48



# Retention Dimensions

## First-Term Airmen (N=87)



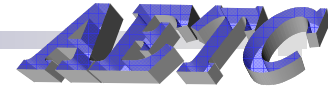
	Percent Responding	Average
<b>Planning to Reenlist (N=53)</b>		
<b>Pay and allowances</b>	<b>70</b>	<b>2.35</b>
<b>Job security</b>	<b>64</b>	<b>2.59</b>
Medical/dental care for AD member	64	2.50
<b>Retirement benefits</b>	<b>62</b>	<b>2.39</b>
Off-duty education/training activities	60	2.50
<b>Planning to Separate (N=33)</b>		
Civilian job opportunities	52	2.47
<b>Pay and allowances</b>	<b>48</b>	<b>2.44</b>
<b>Military lifestyle</b>	<b>45</b>	<b>2.33</b>
<b>Work schedule</b>	<b>39</b>	<b>2.23</b>
Leadership at unit level	36	2.08

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence



# Retention Dimensions

## Second-Term Airmen (N=140)

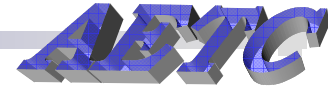


	Percent Responding	Average
Planning to Reenlist (N=88)		
Off-duty education/training activities	67	2.44
<b>Pay and allowances</b>	<b>64</b>	<b>2.41</b>
<b>Retirement benefits</b>	<b>61</b>	<b>2.59</b>
Military lifestyle	59	2.35
<b>Job security</b>	<b>57</b>	<b>2.62</b>
Planning to Separate (N=50)		
<b>Pay and allowances</b>	<b>58</b>	<b>2.52</b>
<b>Military lifestyle</b>	<b>50</b>	<b>2.00</b>
Esprit de corps/morale	42	2.52
<b>Work Schedule</b>	<b>42</b>	<b>2.43</b>
Bonus or special pay	38	2.16

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence



# Retention Dimensions Career Airmen (N=255)

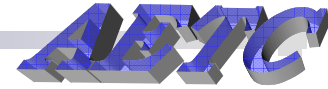


	Percent Responding	Average
<hr/>		
Planning to Reenlist (N=162)		
<b>Retirement benefits</b>	<b>79</b>	<b>2.71</b>
<b>Job security</b>	<b>63</b>	<b>2.54</b>
Medical/dental care for AD member	63	2.42
<b>Pay and allowances</b>	<b>62</b>	<b>2.38</b>
Medical/dental care for family members	59	2.52
Planning to Separate (N=24)		
<hr/>		
Civilian job opportunities	42	2.20
Esprit de corps/morale	33	2.75
<b>Military lifestyle</b>	<b>33</b>	<b>2.38</b>
<b>Work schedule</b>	<b>33</b>	<b>2.12</b>
<b>Pay and allowances</b>	<b>33</b>	<b>2.00</b>

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence



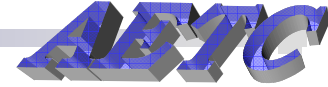
# Summary of Results



- Career ladder progression typical
  - Technical at 3-skill level progressing to more managerial at 9- and CEM-skill level
- Draft STS not analyzed
  - STS match provided in Training Extract for review
- Job satisfaction indicators – Very Good
  - Slightly higher across all indices and TAFMS groups versus the previous survey
  - Generally very high job satisfaction indicators among all jobs and clusters
  - Management IJ – lower perceived use of talents, perceived use of training, and sense of accomplishment
  - Overall, job satisfaction indicators for the ANG and AFRC are higher than for the AD members



# Way Ahead

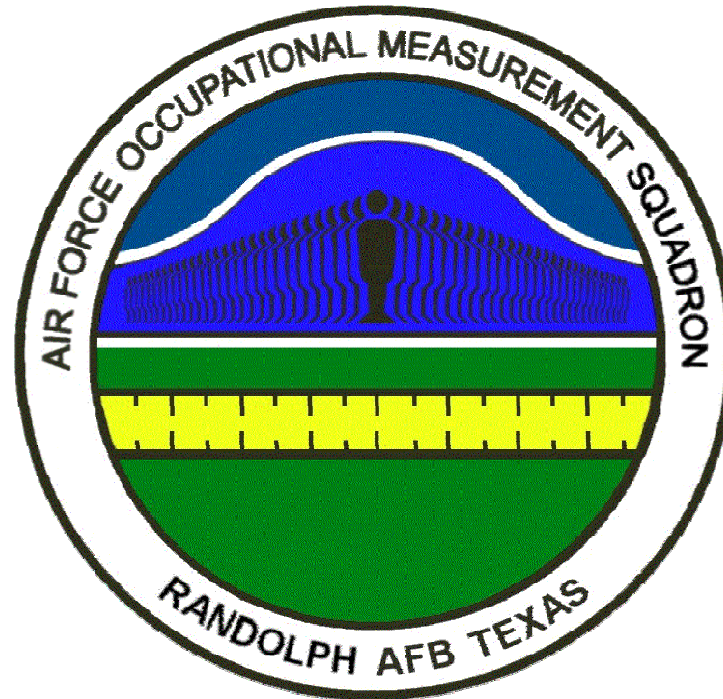
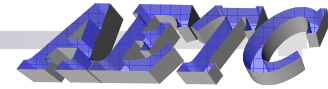


- OSR Delivery Trip – TBD
- Utilization and Training Workshop (U&TW) – TBD (Oct or Nov 04)
- Next SKT rewrite (major) – 1 June 2005





# Questions?



Visit our web site at:

<https://www-r.omsq.af.mil/OA/oaproducts.htm>

E-Mail: [bryan.pickett@randolph.af.mil](mailto:bryan.pickett@randolph.af.mil)

